WHAT IS CLAIMED IS:

1. A method for preventing or inhibiting axonal degeneration in the central nervous system or peripheral nervous system comprising administering to a human in need thereof:

(a) non-recombinant, NS-specific antiself activated T-cells;

(b) a NS-specific antigen;

(c) a peptide derived from a NS-specific antigen;

(d) a nucleotide sequence encoding a NS-specific antigen;

(e) a nucleotide sequence encoding a peptide derived from a NS-specific antigen; or

(f) any combination of (a)-(e),

to ameliorate the effects of injury or disease.

2. A method for promoting nerve regeneration in the central nervous system or peripheral nervous system comprising administering to a human in need thereof:

(a) non-recombinant, NS-specific antiself activated T-cells;

(b) a NS-specific antigen;

(c) a peptide derived from a NS-specific antigen;

(d) a nucleotide sequence encoding a NS-specific antigen;

(e) a nucleotide sequence encoding a peptide derived from a NS-specific antigen; or

(f) any combination of (a)-(e),

to ameliorate the effects of injury or disease.

3. The method according to claim 1 or 2 in which said injury comprises blunt trauma, penetrating trauma, hemorrhagic stroke, ischemic stroke, or damages caused by

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surgery.

4. The method of claim 1 or 2 in which said disease is Diabetic neuropathy, senile dementia, Alzheimer's disease, Parkinson's Disease, facial nerve (Bell's) palsy, glaucoma, Huntington's chorea, amyotrophic lateral sclerosis, non-arteritic optic neuropathy, or vitamin deficiency.

5. The method of claim 1 or 2 in which said disease is not an autoimmune disease or a neoplasm.

6. The method of claim 1 or 2 in which said peptide derived from a NS-specific antigen is an immunogenic epitope or a cryptic epitope.

7. The method according to claims 1 or 2 in which said NS-specific antigen is administered intravenously, intraperitoneally, intramuscularly, subcutaneously, orally, intranasally, vaginally, rectally, intraocularly, intrathecally, intradermally, or buccally.

8. The method according to claim 1(a), 1(c), 1(d), 1(e), 2(a), 2(c), 2(d), or 2(e), further comprising administering to a human in need thereof a NS-specific antigen.

9. The method according to claim 8 in which said NS-specific antigen is administered before or after administration of the composition according to claim 1(a), 1(c), 1(d), 1(e), 2(a), 2(c) or 2(e).

10. The method according to claim 8 in which said NS-specific antigen is administered concurrently with

administration of the composition according to claim 1(a), 1(c), 1(d), 1(e), 2(a), 2(c) or 2(e).

11. The method according to claim ~~1 or 2~~ 14 in which said T-cells are attenuated.

12. The method according to claim ~~1 or 2~~ 14 in which said T-cells are autologous or allogeneic.

13. The method according to claim ~~1 or 2~~ 14 in which the NS-specific antigen or peptide derived therefrom is myelin basic protein, myelin oligodendrocyte glycoprotein, proteolipid protein, myelin-associated glycoprotein, S-100, β-amyloid, Thy-1, P0, or P2.

14. The method according to claim 1d or 2d in which the nucleotide sequence is depicted in Fig. 9, Fig. 10, Fig. 11(A-F), Fig. 12, Fig. 13, or Fig. 14.

15. The method according to claim 1 or 2 in which the NS-specific antigen comprises the amino acid sequence of Fig. 15, Fig. 16, or Fig. 17.

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